PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF
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A Comparison of Certain Antigens used in Complement-fixation Tests in Pulmonary Tuberculosis.—YOUNG and GIVLER (*Am. Rev. Tbc.*, 1919, iii, 476) compared the value of three antigens, the Petroff methyl alcohol soluble, the Corper autolysate and the Wilson bacillary. Their purpose was to find if the Wilson antigen was more suitable for complement-fixation tests than the others. This did not prove to be the case. Examining known cases of tuberculosis, they obtained best results with the Petroff antigen, obtaining 66 per cent. positives against 63 per cent. with Corper antigen and 57 per cent. with the Wilson antigen. They felt there was no justification for the use of the Wilson antigen, the bacilli emulsion having lost much of its antigenic properties by the alcoholic extraction in the preparation. They showed that when this extraction was carried further all of the antigenic properties are destroyed. They found the human hemolytic system superior to the sheep system in doing the tests. The serum of only 12 out of 75 guinea-pigs used proved unsuitable.

Toxic Necrosis and Regeneration of the Acinar Cells of the Pancreas.—Heretofore our knowledge of the action of various toxins upon the acinar cells of the pancreas with the occurrence of mitotic figures and evidences of regeneration has been quite meager. PARKER (*Jour. Med. Res.*, 1919, xl, 471) studied sections from some four hundred autopsies, of which one hundred showed lesions of necrosis in the acinar cells of the pancreas. All tissues were fixed in Zenker's fluid and stained by Mallory's eosin-methylene blue method. The author classifies the necroses of the pancreas etiologically into (1) acute pancreatitis with fat necrosis; (2) necrosis due to toxins; (3) infectious pancreatitis arising by direct extension along the ducts, from the blood stream or from a neighboring focus. In toxic necrosis the pancreas, macroscopically, shows no changes. Microscopically, necrosis may occur in a single acinar cell, groups of cells or diffusely, the total number varying considerably. As in other organs, the necrotic cells are quickly removed by polymorphonuclear and endothelial leukocytes, regeneration rapidly ensues and repair is complete. Inasmuch as similar lesions were found in the heart, liver, kidney and adrenals, because of the type of associated infection, by the fact that there was no involvement of the stroma and no demonstrable organisms, it is concluded that the necroses are of toxic origin. The necroses were most frequently encountered in pneumonia, diphtheria, acute peritonitis and other suppurative processes, due to streptococcus or pneumococcus. In a study of eighty-five cases it was found that the adrenals, pancreas, liver, kidney and heart showed toxic lesions most frequently in the order named. Experimentally, a guinea-pig was subjected to chloroform vapor for two hours. Autopsy material showed active regeneration of liver, adrenal and pancreas, the latter exhibiting no remains of necrotic cells. Another guinea-pig was given liquor potasii arsenitis by mouth and died in five days. Sections showed fatty degeneration of the liver, but no necroses or mitoses, while the pancreas, kidney and particularly the adrenal showed no necroses but signs of active regeneration. The author concludes that these experiments confirm the findings in the human cases in that substances affecting the liver, kidney and adrenal affect the pancreas.

Studies in Epidemic Encephalitis.—LOEWE, HIRSHFELD and STRAUSS (*Jour. Infect. Dis.*, 1919, xxv, 378) report results of injection of monkeys, subdurally and rabbits intracranially, with filtrates of nasopharyngeal mucous membrane from cases of epidemic encephalitis. Lesions were produced in monkeys and rabbits similar to those found in the human brain in fatal cases of epidemic encephalitis. The virus was carried through four generations in rabbits, transmitted to a monkey in the fifth generation and then brought back to rabbits. A natural immunity was found in 50 per cent. of the rabbits. The virus was recovered from the nasopharynx of an animal inoculated intravenously. Cultures of the material used for inoculation were negative.

HYGIENE AND PUBLIC HEALTH

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An Investigation of the Shaving Brush Industry, with Special Reference to Anthrax.—The Public Health Service (*Public Health Reports*, 1919, xxxiv, 994) makes a report on the shaving brush industry from the anthrax viewpoint, as a number of cases of facial anthrax have occurred from contaminated brushes. It appears that the anthrax spores are found almost exclusively on horse-hair imported from oriental sources, and various more or less efficient means of treating the hair were in use, but it was found that boiling or steaming of the hair offered the best means of destroying anthrax spores.

Fishes in Relation to Mosquito Control in Ponds.—HILDEBRAND (*Public Health Reports*, 1919, xxxiv, 1113), an ichthyologist of the U. S. Bureau of Fisheries, reports on the efficiency of top minnows, *Gambusia*